

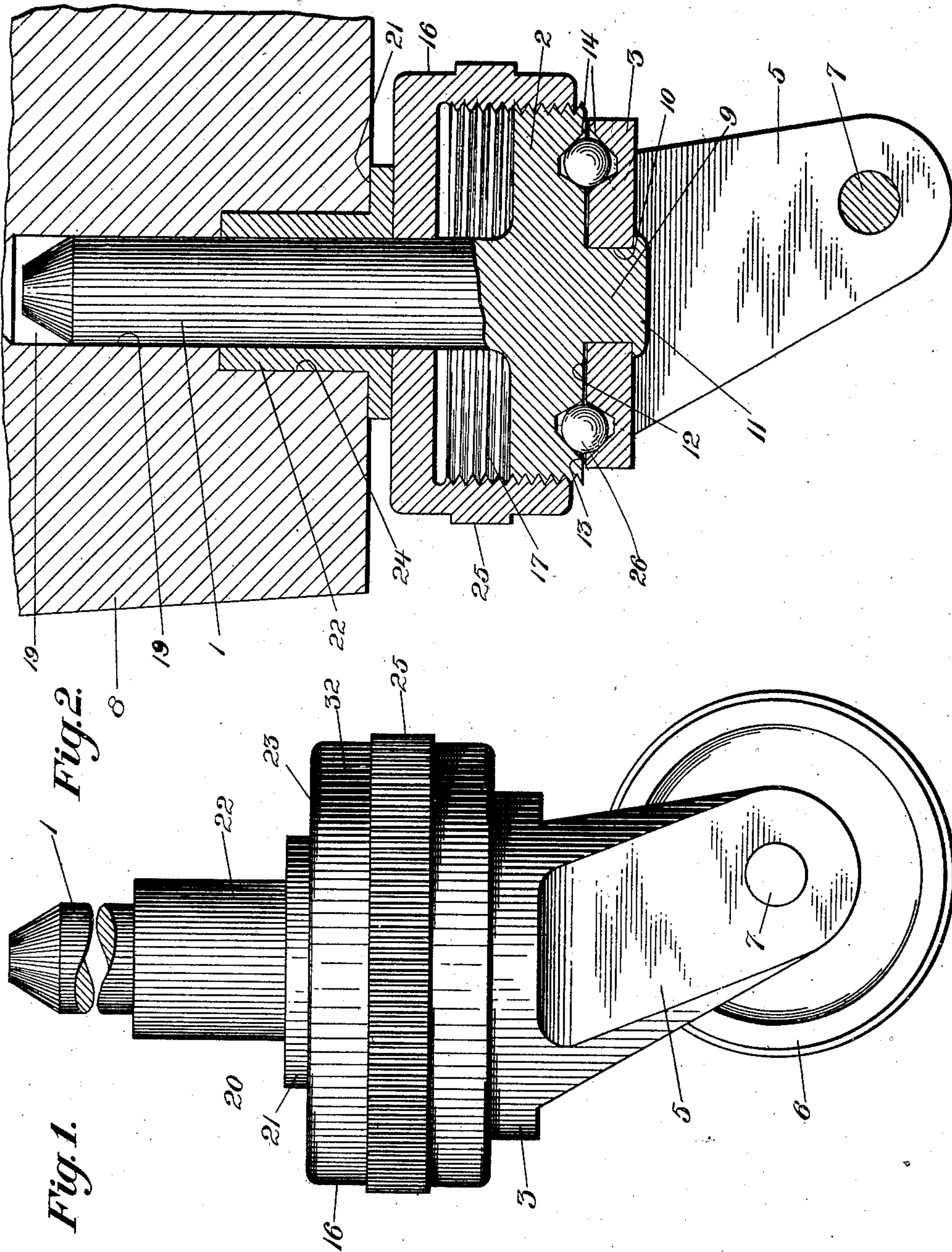
H. P. EILERS.

CASTER.

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986,812.

Patented Mar. 14, 1911.



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UNITED STATES PATENT OFFICE.

HIO P. EILERS, OF NEW YORK, N. Y.

CASTER.

986,812.

Specification of Letters Patent. Patented Mar. 14, 1911.

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To all whom it may concern:

Be it known that I, HIO P. EILERS, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Casters, of which the following is a specification.

The invention relates to novel constructions in adjustable casters for supporting articles of furniture and the like, and in certain of its features the invention relates to such adjustable casters having also ball bearings.

The objects of the invention will appear in part hereinafter and will in part be obvious to those skilled in the art.

The invention consists in the novel parts, articles, constructions, combinations and improvements herein shown and described.

The accompanying drawings, referred to herein and forming a part hereof, illustrate one embodiment of the invention, the same serving in connection with the description herein to explain the principles of the invention.

Of the drawings:—Figure 1 is an elevation of a caster embodying the principles of the invention; and Fig. 2 is a central section referring to Fig. 1, the caster wheel being omitted.

Referring to the accompanying drawings, which illustrate, by way of example, an embodiment of the invention, a spindle 1 is provided which fits into an opening or recess 19 in the article of furniture or other object supported by the caster. Said spindle 1 has fixed to or made integral therewith a disk 2, said disk 2 resting upon the plate 3 of the wheel carrying part 4 of the device. From the plate 3 extend two bracket arms 5 in which arms the axle pin 7 of the caster wheel 6 is carried, the wheel 6 being located between the arms 5.

A swiveling connection is provided between the disk 2 and plate 3 whereby the caster wheel 6 may be free to swing or swivel in the usual manner, the plate 3 rotating therewith while the disk 2 remains stationary. To so hold the disk 2, the spindle 1 may be friction tight or otherwise made fast in the recess 19 in the article of furniture 8 to which the caster is attached. To allow for such swiveling movement, a stub shaft 9 is provided projecting from the lower surface of the disk 2 through an ori-

fice 10 in the plate 3. The end of the shaft 9 may be upset as at 11 to hold the two parts together, or other suitable fastening means may be used. In the present embodiment a circular raceway 14 for a series of balls 26 is provided. In the embodied form, circular grooves are formed in the surface 12 of the disk 2 and in the surface 13 of the plate 3 constituting the raceway 14 for the balls. When the ball bearing is used it will be understood that these surfaces are not in close frictional contact, the friction in such case being taken up on the balls.

Means are provided whereby the article of furniture 8 may be raised or lowered relatively to the caster, and in the embodied form of such means the circular disk 2 is provided with screw threads 15 on its periphery. Fitting around and over said circular disk 2 is a hollow member 16 having cylindrical side walls 32 and a flat top 23 having an internal thread 17 which engages the thread 15 on the periphery of disk 2. Said thread 17 may occupy the entire internal surface of the cylindrical walls of the member 16 to give a wide range of adjustability. The spindle 1 projects through the orifice 18 in the member 16.

The article of furniture 8 may rest directly on the top of the member 16, or a bearing piece 20 may be provided interposed therebetween. The bearing piece 20 is shown with an annular disk 21 and a cylindrical sleeve 22 projecting therefrom. The annular disk 21 rests upon the top surface 23 of the member 16 and the collar 22 projects into an enlarged portion 24 of the recess 19. A knurled or milled band 25 may be provided about the exterior of the cylindrical portion of the member 16 if desired.

The operation of the device described and illustrated herein, is as follows: The caster wheel 6 with the bracket arms 5 and plate 3 are free to swivel as the supported article is moved. The disk 2 is held stationary by the engagement of the spindle 1 with the supported article. The disk 2 and plate 3 run on the balls 26 during such swiveling movement. To change the level of the supported article at the point of support by the caster, the member 16 may be grasped at the knurled or milled band 25 and turned in either direction. In one case moving the disk 2 inwardly and in the other case outwardly relatively to the member 16. The plate 3 is proportioned so that it will pass within the

member 16 if this be found desirable thus also increasing the range of adjustment.

It will be understood that the present invention provides a caster which is simple and strong in construction, easy in action and adjustment, and possessing a wide range of adjustability for its size, as well as possessing other advantages.

What I do claim as my invention and desire to secure by Letters Patent, is:

1. A caster including in combination a spindle projecting into the article of furniture to be supported, and engaging said article of furniture to hold said spindle against rotation, a circular disk integral with said spindle at its lower end, said disk being threaded on its periphery, a cylindrical plate rotatably connected to said disk upon the opposite face thereof from the spindle, said disk and plate being concentric, supports for a caster wheel connected to the opposite side of said plate, a caster wheel rotatably carried by said supports, a cylindrical internally threaded member inclosing said threaded disk, the threads on said member being in mesh with the threads on the disk, the article of furniture being supported by said cylindrical member.

2. A caster including in combination a spindle projecting into the article of furniture to be supported, and engaging said article of furniture whereby said spindle is held against rotation, a circular disk integral with said spindle at its lower end, said disk be-

ing threaded on its periphery, a stub shaft extending from the lower side of said disk, a cylindrical plate fixed on said stub shaft to rotate relatively thereto, said plate being of less diameter than the threaded portion of said disk, two bracket arms extending from said plate, a caster wheel rotatably carried by said bracket arms, a member having cylindrical side walls and a flat top, said side walls having an internal thread engaging the thread on the periphery of said circular disk, the article of furniture being supported upon the flat top of said member.

3. A caster including in combination a spindle held from motion relatively to the supported article of furniture, a disk fixed to said spindle, a plate rotatably attached beneath said disk, a caster wheel carried by said plate, and adjusting means acting between said disk and the supported article of furniture to move the article of furniture and said spindle relatively to each other longitudinally to adjust the height to which the article of furniture is supported from the floor, and a ball bearing between said plate and disk.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HIO P. EILERS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."